

ABSTRACT

ILLUMINATION SYSTEM USING A PLURALITY OF LIGHT SOURCES

An illumination system includes a plurality of radiation generating sources, such as LED dies. A corresponding plurality of optical waveguides is also provided, with each
5 waveguide having a first and a second end, with each first end being in optical communication with the corresponding LED die. An array of corresponding passive optical elements is interposed between the plurality of LED dies and the corresponding first ends of the plurality of optical waveguides. The illumination system provides for substantially high light coupling efficiency and an incoherent light output that can appear to the human observer as arising
10 from a single point of light. In addition, the light can be output remotely at one or more locations and in one or more directions.